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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/637,495	08/11/2000	Gregory J. Hewlett	TI-28454	7603

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EXAMINER

LIU, MING HUN

ART UNIT

PAPER NUMBER

2697

DATE MAILED: 04/25/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/637,495

Applicant(s)

HEWLETT ET AL.

Examiner

Ming-Hun Liu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-2 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 6,151,011 to Worley, II et al in view of US Patent 6,043,801 to Bassetti. Worley describes a method of displaying image data bits, where the method calls for receiving an image data word for an image pixel, with the data word comprised of at least a first and second image data bit (column 3, lines 5-10). Also displaying the first image data bit during some, but not all, of said refresh periods; and displaying second image data bit during more of said refresh periods than first image data bit was displayed during (column 3, lines 22-29). However, Worley never accounted for dividing the image frame period into at least two refresh periods. Bassetti explained in his invention the concept of temporal integration techniques, splitting the frame into at least two refresh periods is a common practice in the art (column 4, lines 12-16). It would have been obvious to one skilled in the art to combine temporal integration along with Worley invention in order to further reduce flickering.

In reference to claim 2, Worley describes in his invention a method of allocating a display period to each image data bit in an m-bit image data word and determining the minimum

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temporal frequency for each of the image data bits and minimum temporal frequency necessary to present each of the image data bits from appearing to flicker (column 7, lines 28-35). As stated above the introduction of dividing an image frame period into two refresh periods would have been obvious to one skilled in the art. With that, it would have been obvious to display each image data bit in enough of the refresh periods to achieve minimum temporal frequency, wherein not all of said image data bits are displayed in all of the refresh periods, a idea that is inherent to the concept of temporal integration (column 4, lines 40-54).

3. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Worley in view of Bassetti and in further view of US Patent 6,061,049 to Pettit et al.

Worley describes a display system comprising a controller for receiving image data and processing the image data, wherein the image data is comprised of m image bits for each pixel of an image (column 3, lines 43-45). Worley describes a system that resembles the one being claimed but fails to disclose a display device in electrical communication with the controller, the display device for providing a modulated light beam to each of an array of image pixels, the modulation in response to processed image data from the controller. This limitation is obvious if not inherent to the invention being claimed. As seen in column 1, lines 15-25 Pettitt et al. discloses that the claimed limitation is the common method used by display systems such as this to create images. It would have been obvious to one skilled in the art to integrate the display device in such a fashion in order to display the desired image. Lastly, the reasoning behind the rejection of the limitation for allocating a series of refresh periods to aid image bits such that not

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all of said image bits are displayed in the same number of refresh periods, is the same as reasoning used for the rejection above.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US Patent 6,204,834 to Baker et al: Uniform brightness

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ming-Hun Liu whose telephone number is 703-305-8488. The examiner can normally be reached on Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Mancuso can be reached on 703-305-3885. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4750.

Ming-Hun Liu
March 27, 2003



JOSEPH MANCUSO
PRIMARY EXAMINER